CLUX-1H8CAT

1 by 8 HDMI to CAT 6 V1.3 Splitter

Operation Manual

CLUX-1H8CAT

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Safety Precautions

Please read all instructions before attempting to unpack or install or operate this equipment, and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through module openings or empty slots, as you may damage parts.
- Do not attach the power supply cabling to building surfaces.
- Do not allow anything to rest on the power cabling or allow it to be abused by persons walking on it.
- To protect the equipment from overheating, do not block the slots and openings in the module housing that provide ventilation.

Revision History

Version No	Date	Summary of Change
V1	20091028	Preliminary Release
V2	20101116	IR Connection in Pg. 7

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1. Introduction

The 1 by 8 HDMI to CAT6 1.3 splitter when used with CAT6 to HDMI receivers it will allows user to distribute a HDMI source through CAT6 cable over 45 mters. This solution provides a direct input of one HDMI to a looped output of HDMI and 7 CAT6 outputs – a smart way to link and display a single source to 8 different screens simultaneously. Alternatively, the HDMI output can also be treated as an extender to connect to another HDMI splitter or cascade with other unit in multiple layers. This unit allows user to transmit HDMI signal via CAT6 without compression over long distance. The HDMI to CAT6 splitter also incorporates functions like EDID, System Reset, Deep color and IR systems.

2. Applications

- One HDMI extension source with multi CAT6 to HDMI displays and one HDMI loop through output
- Home entertainment integration
- Multi-task project presentation
- Showroom Display
- Advertising display control
- System installation control

3. Package Contents

- 1 by 8 HDMI to CAT6 Splitter
- 1 x IR Receiver
- 1 x IR Blaster
- 5V DC power supply adaptor
- Power Cord
- Operation Manual

4. System Requirements

- Input source equipment(s) with HDMI Cable(s).
- Output display device(s) with HDMI cables and or CAT 6 to HDMI receiver with HDMI cable to display.

5. Features

- HDMI 1.3, HDCP1.1 and DVI1.0 compliant
- Deep color video up to 12bit, 1080p@60Hz
- One HDMI source connection to one HDMI output and seven CAT6 to HDMI - allowing users to link up to eight displays simultaneously
- HDCP keysets allows each output to work independently when connecting to a HDMI display
- Supports DVI source and DVI display by using HDMI to/from DVI adaptor cable
- Supports LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio transmission (32-192kHz Fs sample rate)
- Supports a wide range of PC and HDTV resolutions from VGA to SXGA (1280 x 1024) and 480i to 1080p.
- Selects EDID from TV mode or STD mode (this splitter)
- Deep color setting of 8 bit or 12 bit
- IR remote control
- System Reset function
- CEC Bypass

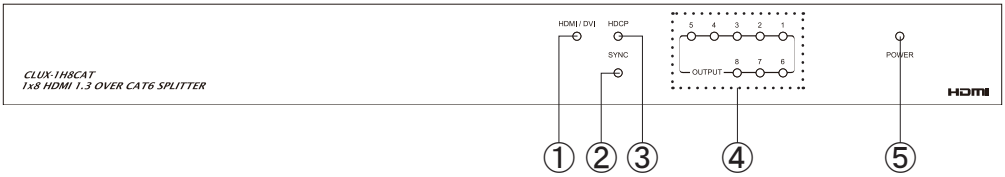
6. Specifications

Frequency Bandwidth	2.25Gbps (single link)
Input Ports	1 x HDMI female port (Type A connector)
Output Ports	7 x CAT6 output Video/7 x CAT6 output DDC 1 x HDMI female port (Type A connector)
EDID	STD / TV
HDMI Audio Output	PCM2, 5.1, 7.1, Dolby 5.1, DTS 5.1, DD+, D-TrueHD, DTS-HD
HDMI Cable In	1080p 8-bit (15M), 12-bit (10M)
HDMI Cable Out	1080p 8-bit (15M), 12-bit (10M)
CAT6 Cable Out	1080p 8-bit (45M), 12-bit (15M)
HDMI Resolution	480i, ~ 1080p 50/60, 1080p 24, VGA ~ SXGA
IR Frequency	20 ~ 60KHz
ESD Protection	Human body model: ± 8kV (air-gap discharge) ± 4kV (contact discharge)
Power Supply	5VDC/6A (US/EU standards, CE/FCC/UL certified)
Dimensions (mm)	436(W) x160(D) x 44(H)
Weight(g)	2130
Chassis Material	Metal
Silkscreen Color	Black
Power Consumption	20W
Operating Temperature	0˚C ~ 40˚C / 32˚F ~ 104˚F
Storage Temperature	-20˚C ~ 60˚C / -4˚F ~ 140˚F
Relative Humidity	20~90% RH (non-condensing)

7. Operation Controls and Functions

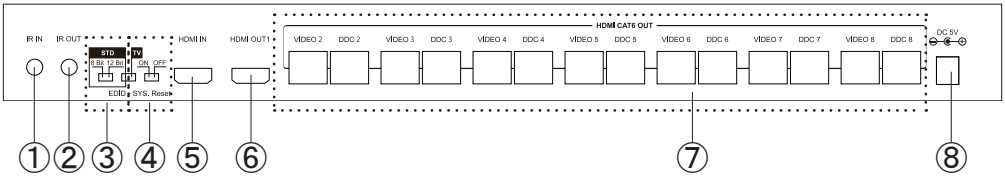
The following sections describe the hardware components of the unit with installation and functionality.

7.1 Front Panel



① HDMI/DVI indicators: When LED turns on this means the input source is HDMI and when the input source is DVI the LED will not turn on.
② HDCP indicators: When the input source is with the HDCP protection the HDCP LED will illuminate.
③ SYNC Indicator: The LED will illuminate when the device detected source's signal.
④ Output LED1~8: The LED will illuminate when output display is connected with power on.
⑤ Power LED: The LED will illuminate when power is on.

7.2 Rear Panel


IR IN
IR OUT
STD
TV
8 Bit 12 Bit
ON OFF
EDID SYS. Reset
HDMI IN
HDMI OUT
HDMI CAT6 OUT
VIDEO 2 DDC 2 VIDEO 3 DDC 3 VIDEO 4 DDC 4 VIDEO 5 DDC 5 VIDEO 6 DDC 6 VIDEO 7 DDC 7 VIDEO 8 DDC 8
DC 5V
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① IR IN: This slot is to connect with the IR receiver cable included in the package and use the existing source's remote controls to control source equipments.
② IR OUT: This slot is to connect with the IR blaster cable included in the package and place it in front of the sources for infrared signal sending.
③ EDID Control Switcher: Switch the EDID between STD & TV. Switch to STD to use built-in EDID or switch to TV to use TV's EDID. Default factory setting is on TV, leave as it is when picture is displayed properly.

Note:

1. When EDID switch to TV, the unit will detect the first HDMI output sink's EDID and record in the unit. If the first detected output sink is DVI it will pass to next source until the first HDMI source been detected. The detection priority is HDMI v1.3 > HDMI v1.2 > DVI.
2. When EDID switch to STD the unit will use built-in EDID which supports:

Video → 1080p 8-bit or 12-bit (max)
Audio → PCM 2CH

3. The EDID selection will only activate when the unit is re-plug and power on.

④ System Reset: Switch to "ON", the system will send the internal CEC to the display within 8~10 minutes to force all the displays to switch to HDMI 1 input port. Meanwhile, the source's CEC will not functional to the system. When switch to "OFF", the system reset function will be terminate. Factory default is on "OFF".

⑤ HDMI input: This slot is for connecting the source equipment with HDMI cables.

⑥ HDMI output: This slots is for connecting the display with HDMI Cable.

Note:

A. Cable tested with CAT-6E / 23AWG / Solid and therefore, cable with different specification may result in different distance.

B. Cable distance tested with equipment PS3 40G, and 37" SamSung 12 bit LCD TV.

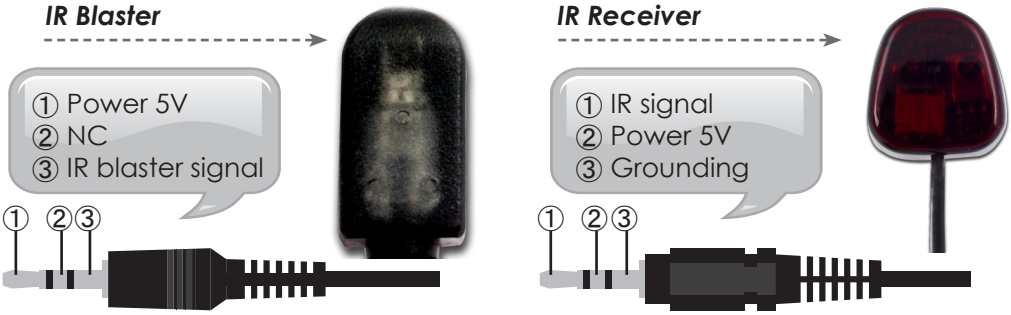
C. Figures provided in this manual are reference figures only, actual figures may depend on source and display use with cable specification.

⑦ Video/DDC 2~8: These slots allow you connect to the HDMI displays with CAT6 to HDMI receiver. When more than one output are connected, the HDMI outputs play identical video signal simultaneously.

⑧ Power: This slot is to plug the 5VDC power supply included in the package into the unit and connect the adaptor to an AC wall outlet.

8. Pin Definitions

8.1 IR Cable Pin Definitions



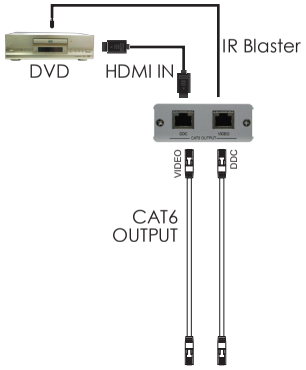
Note: The frequency on both IR Receiver & Blaster can support 20~60KHz.

8.2 RJ-45 Pin Definitions

Pin	Video	DDC
1	TX2+	DDC Bus Clock
2	TX2-	NC
3	TX1+	DDC Bus Data
4	TX0+	Power 5V
5	TX0-	GND
6	TX1-	IR IN
7	TXC+	HPD
8	TXC-	CEC

9. Connection and Installation

CH-106TX
CH-1106TX



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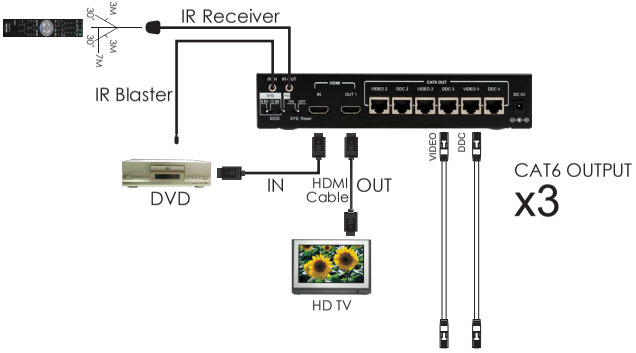
CLUX-1H4CAT
CLUX-1H8CAT



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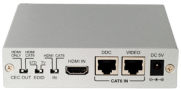
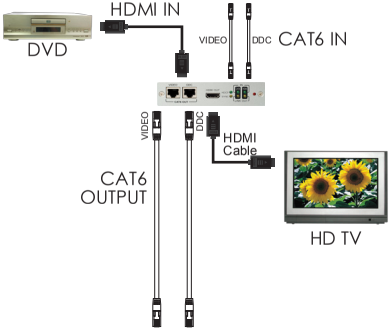
CLUX-22HC



CH-106TX
CH-1106TX
CLUX-1H4CAT
CLUX-1H8CAT
CMLUX-4H4CAT
CLUX-22HC



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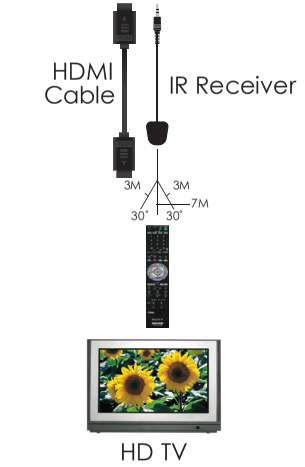
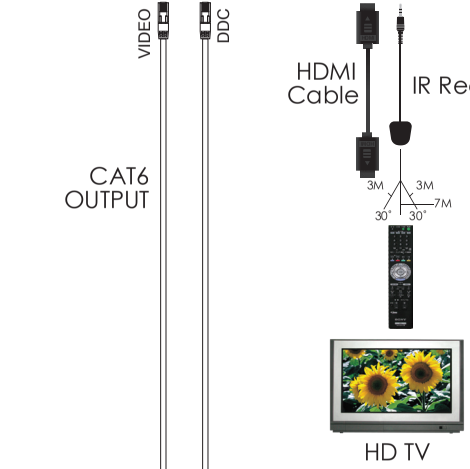
CH-106RX / CH-1106RX



B

CLUX-1CAT4H / CLUX-1CAT8H



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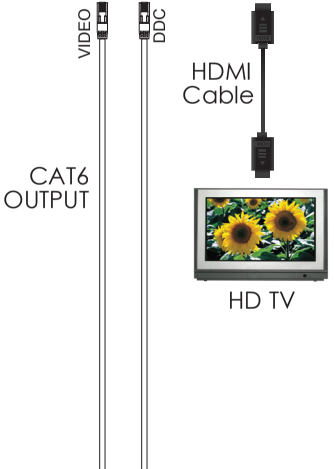
C

CLUX-22HC



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Acronyms

A

Acronym	Complete Term
CAT6	Category 6 cable
DVI	Digital Visual Interface
EDID	Extended Display Identification Data
HDCP	High-Bandwidth Digital Content Protection
HDMI	High-Definition Multimedia Interface
HDTV	High-Definition Television
IR	Infrared
LPCM	Linear Pulse Code Modulation
STD	Standard
SYNC	Synchronize
SXGA	Super Extended Graphics Array
VGA	Video Graphics Array

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